

高级数据结构和算法分析

Advanced Data Structures and Algorithm Analysis

主讲教师： 丁尧相

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Course website:

<https://yaoxiangding.github.io/ADS>

PTA bind key:

515995

基本信息:

Lecture Time:

Tuesday 6-8 (every week), 紫金港西2-301

Teacher: 丁尧相

Office: 519 Meng Minwei Building, Zijingang Campus

E-Mail: yxding@zju.edu.cn

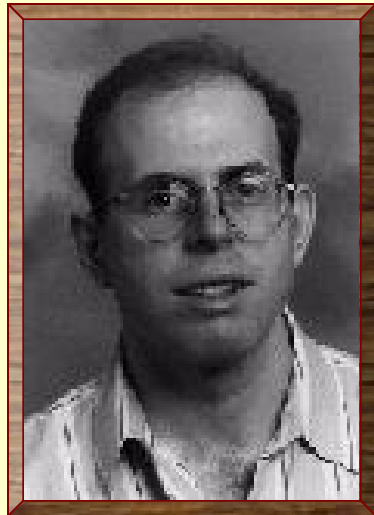
Office hours: Tuesday 16:00-18:00

(Please make appointment on Ding Ding, E-Mail, or class. For unexpected visits, I have to apologize for the possible absence.)

TA: 吴奕涵

E-Mail: 1271647917@qq.com

教材



Data Structures and Algorithm Analysis in C

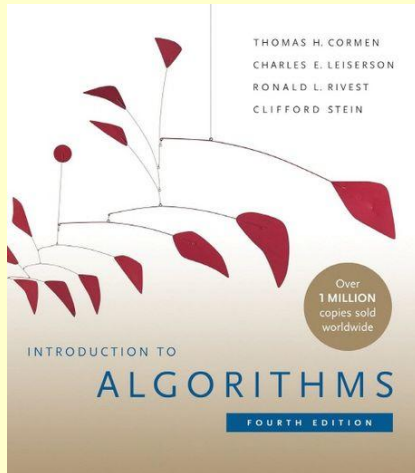
(2nd Edition)

Mark Allen Weiss

陈 越 改编

Email: weiss@fiu.edu

📖 教材



Introduction to Algorithms

(4th Edition)

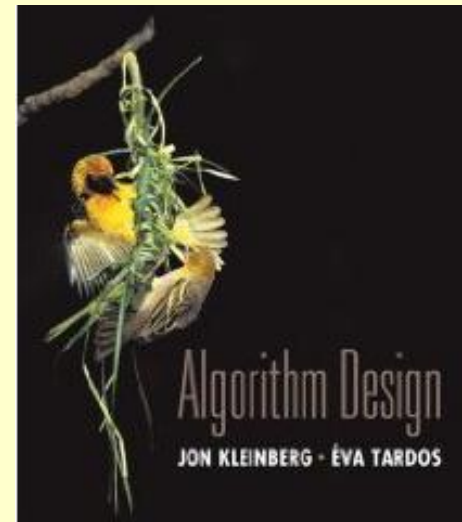
Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein

The MIT Press, 2022

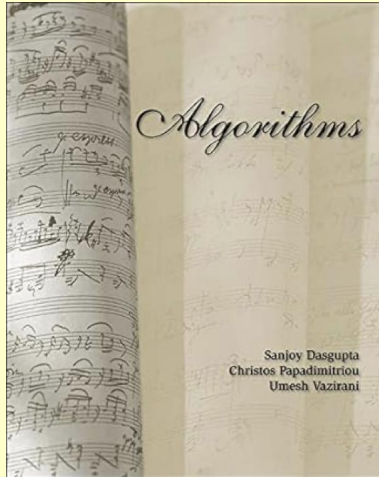
Algorithm Design

Jon Kleinberg, Eva Tardos

Addison Wesley, 2005



参考读物



Algorithms

*S. Dasgupta, C. H. Papadimitriou,
and U. V. Vazirani*

McGraw-Hill Education, 2006

Algorithms
*Robert Sedgewick and
Kevin Wayne*
Addison Wesley, 2010



参考书目 (Reference)

➤ 数据结构课程设计

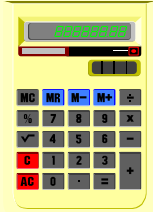
何钦铭、冯雁、陈越 著 浙江大学出版社

➤ 数据结构与算法分析 (C语言版)

魏宝刚、陈越、王申康 编著 浙江大学出版社

➤ 数据结构学习与实验指导

陈越、何钦铭、徐镜春、魏宝刚、杨柞 编著
高等教育出版社



课程评分方法 (Grading Policies)



**Homework
(10)**



**Discussions
(10)**



**Research Project
(30)**



**MidTerm
(10*)**

Total \leq 60 (up to 5 bonus within 60)



Final Exam (40*)



Homework Assignments (10)

- ✎ Register and login at <https://pintia.cn/>
- ✎ Bind your student ID with bind key
- ✎ Enter

Bind Student ID

zju - 浙江大学

Name

Student ID

Bind Key (obtained from your instructor)

Bind

Student ID bound

No Student

515995

chenyue

Home

中文

Logout



Research Projects (30)

- ◆ Done in groups of ≤ 3
- ◆ choose **2** out of 8 topics
- ◆ Report (15+15 points)
- ◆ Submit before the exam week
- ◆ Follow the style file



Discussions (10)

- **Done in the same group to projects**
- **2 times to submit course suggestions (in pdf), each scores 5, including:**
 - **Content want to learn**
 - **Hard parts for more explanations**
 - **Hard problems to solve**
 - **Suggestions on teaching**
 - **...**



Bonus scores (5)

- ◆ **One of the Tasks:**
 - ◆ **bonus problems within projects (group)**
 - ◆ **on-course project presentations (group)**
 - ◆ **on-course topic sharing (individual)**
 - ◆ **technical notes (individual)**
 - ◆ **+1 completion of projects (group)**
- ◆ **Grading: no-pass (0) , pass (3), good job (5)**
- ◆ **Doing multiple tasks will receive the maximum score for one of the tasks.**



Representation Schedule

	A	B
1	实验汇报	专题
2		
3		
4		
5		
6	1	
7	1	
8		1
9		
10	1	
11	1	
12	1	
13	1	
14		1
15	1	
16	1	



Project Representation

- ◆ One week for one project in order
- ◆ Should also complete the project report
- ◆ In-class presentation (within 10 minutes)
- ◆ The speaker can be chosen freely in the group.
While the contributions of the members in the projects should be clarified.
- ◆ If there are many volunteers, at most 3 groups will be chosen to give presentations with first-come-first-serve.



Topic Sharing

- ◆ **Two times: 1 for data structure 2 for algorithm**
- ◆ **In-class presentation (within 10 minutes)**
- ◆ **Topic can be chosen freely while need to be pre-submitted and approved.**
- ◆ **If there are many volunteers, at most 3 topics will be chosen to give presentations with first-come-first-serve.**



Technical notes

- ◆ Similar to topic sharing but without representations.
- ◆ Need to be ≥ 5 page pdf report.
- ◆ Submit before week 16.
- ◆ Will be distributed in the class.